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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/612,969	03/04/1996	DENNIS W. NUSSER	1231-12	8205

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EXAMINER

NGUYEN, ANTHONY H

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	08/612,969	NUSSER, DENNIS W.
	Examiner	Art Unit
	Anthony H Nguyen	2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.

- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.

- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on _____.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-6,9-19,21-25,27 and 28 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-6,9-19,21-25,27 and 28 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

✓

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

Art Unit: 2854

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of keys having functions “up, down...escape...” (claims 6 and claim 23) and symbols such as “~!@#\$%^...? or ?” (claim 23 and claim 25) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2854

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6,9-19,21-25, 27 and 28 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Herzog et al. (US 4,669,903) in view of Wang (US 5,334,976) and Christopher et al. (US 4,075,679).

Herzog et al. teaches an input apparatus having substantially the structure as claimed. Herzog et al. teaches a keyboard having a plurality of keys which generate input signals including a plurality of numerals and letters which are arranged in "QWERTY" and "DVORAK" layouts as shown in Figs.1 and 2 of Herzog et al. Herzog et al. fails to state or teach clearly the vertical and horizontal spacings between the keys. However, Wang teaches an input apparatus having a plurality of keys in which a minimum center-to-center horizontal spacing in the range of 12-19 mm and a vertical spacing of 18-21 mm for the keys such as Shift, Control and Alter (Wang, the paragraph bridging cols.4 and 5 and col.5 second paragraph). Note that the spacing is obviously smaller for the alphanumeric keys 26-28 as shown in Fig.1 of Wang. Note also that the widths and depths of the keys of a standard keyboard is about 12 mm which is also in the range as claimed. Christopher et al. teaches a keyboard having a full complement of alphanumeric keys and function keys as shown in the Figure (Front page). In view of the teachings of Wang and Christopher et al., it would have been obvious to one of ordinary skill in the art to modify the keyboard of Herzog et al. by providing the minimum center-to-center horizontal and vertical spacings between the input keys as taught by Wang and Christopher et al. for convenience of

Art Unit: 2854

typing. With respect to claims 1,21,22, and 27, the selection of a desired keystroke travel range involves only an obvious matter of design choice based upon obvious experimentation. This obviousness is evidenced by the fact that applicant recognizes that the conventional keystroke travel range is about 1.5-6 mm (the specification, page 10 lines 20-24). With respect to claims 6,14,18, and 25, each of the patents to Wang and Christopher et al. teaches a plurality of keys having the functions as recited.

Response to Arguments

Applicants' arguments filed on June 22, 1999 have been fully considered but they are not persuasive of any error in view of the new ground(s) of rejections. Applicant argues that Wang, Herzog et al., and Klauber fail to teach the fixed key input apparatus as claimed. However, as explained above, Herzog et al. teach a keyboard including alphanumeric keys which are arranged in "QWERTY" and "DVORAK" layouts. Wang teaches a keyboard including keys which generate input signals of numerals, letters and symbols as recited. The keys of Wang have minimum center-to-center horizontal and vertical spacings in the range as claimed. Note also that the recited horizontal and vertical spacings are also rendered obvious with respect to the horizontal and vertical spacings of a conventional keyboard. Christopher et al. is cited to show the conventional small keyboard having a full complement of alphanumeric keys and function

Art Unit: 2854

keys. Therefore, it is believed that the rejections are proper. There is no apparent unobviousness in the structure claimed relative to the structure of the prior art as applied.

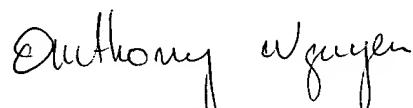
Conclusion

The patent to Layeyre is cited to show other structure having obvious similarities to the claimed structure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Nguyen whose telephone number is (703) 308-2869. The examiner can normally be reached daily from 9 AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld, can be reached on (703) 305-6619. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Anthony Nguyen
May 6, 2002
Patent Examiner
Technology Center 2800